



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE

United States Patent and Trademark Office

Address: COMMISSIONER FOR PATENTS

P.O. Box 1450

Alexandria, Virginia 22313-1450

www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/531,085	04/11/2005	Hiroto Tamaki	925-319	2113
23117 7590 12/16/2009 NIXON & VANDERHYE, PC 901 NORTH GLEBE ROAD, 11TH FLOOR ARLINGTON, VA 22203				
EXAMINER				
KOSLOW, CAROL M				
ART UNIT		PAPER NUMBER		
1793				
MAIL DATE		DELIVERY MODE		
12/16/2009		PAPER		

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/531,085

Applicant(s)

TAMAKI ET AL.

Examiner

C. Melissa Koslow

Art Unit

1793

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 25 November 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-32 and 48-62 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-31, 48, 50 and 53-62 is/are allowed.
- 6) ☒ Claim(s) 32, 49 and 51 is/are rejected.
- 7) ☒ Claim(s) 52 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 11/25/09
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 25 November 2009 has been entered.

The amendments to claims have overcome the 35 USC 112 rejection and the art rejection over claims 1-5, 7-9 and 14-25. Applicant's arguments with respect to the remaining art rejection over claim 32 have been fully considered but they are not persuasive.

Claim 51 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim, or amend the claim to place the claim in proper dependent form.

This claim, which is depends on claim 5, teaches the N:O weight ratio is within the range of 0.2-2.1. Claim 5 teaches the N:O weight ratio is within the range of 0.2-2.1. Thus claim 51 teaches the same weight ratio as claim 5 and therefore does not further limit claim 5.

Claims 49 and 51 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 51 is indefinite since it depends from claim 5, but teaches the identical nitrogen to oxygen weight ratio as claim 5. Claim 49, which depend from claim 1, is indefinite since it teaches L is at least one of Sr, Ca and Ba; but claim 1 does not include Sr as a choice for L.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim 32 is rejected under 35 U.S.C. 102(c) as being anticipated by U.S. patent 6,717,353.

This reference teaches an oxynitride phosphor having the formula $(\text{Sr}_{1-a-b-c}\text{Ca}_b\text{Ba}_c)\text{Si}_x\text{N}_y\text{O}_z\text{:Eu}_a$, where a is 0.002-0.2, b is 0-0.25, c is 0-0.25, x is 1.5-2.5, y is 1.5-2.5 and z is 1.5-2.5. Thus the reference teaches an oxynitride phosphor that contains Si, Eu and at least one of Sr, Ca and Ba. Si is one of the claims M elements. Eu is one of the claimed R elements and Sr, Ca and Ba are several of the claimed L elements. Thus the reference teaches the phosphor having the same components as that resulting from the process of claim 26. The claimed phosphor and that taught appear to be identical. While the taught phosphor is produced by different process than that claimed, the resulting phosphors appear to be identical. Even though product-by-process claims are limited by and defined by the process, determination of patentability is based on the product itself. The patentability of a product does not depend on its method of production. If the product in the product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 777 F.2d 695, 698, 227 USPQ 964, 966 (Fed. Cir. 1985). The reference teaches the claimed phosphor.

The removal of Sr from claim 1 does not overcome the rejection over claim 32 since the phosphor of claim 32, which is the phosphor resulting from the process of claim 26, can include Sr. Applicants have not shown that the phosphor resulting from the process of claim 26; which is the phosphor of claim 32; is different from that claimed. The 35 USC 1.131 declaration does not overcome this rejection for the reasons given in the previous action. It is noted that claim 26 does

not limit the oxynitride phosphor to any particular formula, thus it is open to any oxynitride phosphor that contains L, M and R. The rejection is maintained.

Claims 1-5, 7-31, 48, 50 and 53-62 are allowable over the cited art of record.

Claims 10-13, 21, 22, 26-31 and new claims 48, 50 and 53-62, depend from claim 10, are allowable for the reasons given in the previous actions.

The phosphor of claims 1-5, 7-9, 14-20 and 23-25 is not taught or suggestion by the cited prior art of record. There is no teaching or suggestion in the cited art of an oxynitride phosphor where the host has the formula $L_xSi_yO_zN_{(2x/3)+(4y/3)-(2z/3)}$, where $0.5 < x < 1.5$, $1.5 < y < 2.5$, $1.5 < z < 2.5$, and L is at least one of Mg, Ca and Ba. The phosphor of U.S. patent 6,717,353 requires the presence of Sr.

Claims 51 and 52 are objected to under 37 CFR 1.75 as being substantial duplicates of claims 5 and 11, respectively. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Melissa Koslow whose telephone number is (571) 272-1371. The examiner can normally be reached on Monday-Friday from 8:00 AM to 3:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo, can be reached at (571) 272-1233.

The fax number for all official communications is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/cmk/
December 15, 2009

/C. Melissa Koslow/
Primary Examiner
Art Unit 1793